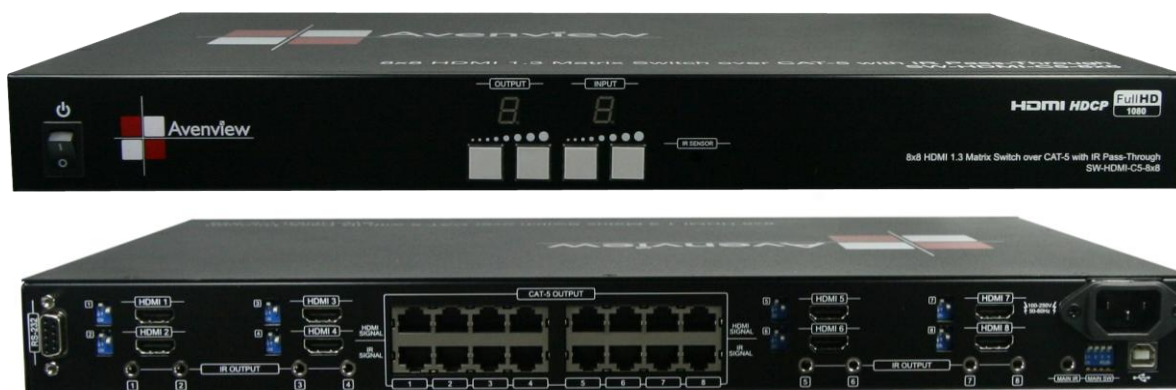




205 Westwood Ave, Long Branch, NJ 07740  
Phone: 866-94 BOARDS (26273) / (732)-222-1511  
Fax: (732)-222-7088 | E-mail: [sales@touchboards.com](mailto:sales@touchboards.com)

## 8X8 HDMI 1.3 over CAT5 Matrix Switch with IR Pass-Through and 3D Support



Model #: SW-HDM3D-C5-8X8



Model #: HDM3D-C5SW-R

**HD ready 1080p** **HDMI HDCP** **7.1CH Audio** **TRUEHD**

© 2012 Avenview Inc. All rights reserved.

The contents of this document are provided in connection with Avenview Inc. ("Avenview") products. Avenview makes no representations or warranties with respect to the accuracy or completeness of the contents of this publication and reserves the right to make changes to specifications and product descriptions at any time without notice. No license, whether express, implied, or otherwise, to any intellectual property rights is granted by this publication. Except as set forth in Avenview Standard Terms and Conditions of Sale, Avenview assumes no liability whatsoever, and disclaims any express or implied warranty, relating to its products including, but not limited to, the implied warranty of merchantability, fitness for a particular purpose, or infringement of any intellectual property right. Reproduction of this manual, or parts thereof, in any form, without the express written permission of Avenview Inc. is strictly prohibited.

## Table of Contents

Section 1: Getting Started .....	3
1.1    Important Safeguards .....	3
1.2    Safety Instructions .....	3
1.3    Regulatory Notices Federal Communications Commission (FCC) .....	4
1.4    Introduction .....	4
1.5    Package Contents.....	6
1.6    Before Installation.....	6
1.7    Panel Description .....	7
1.7.1 SW-HDM3D-C5-8X8 Front Panel.....	7
1.7.2 SW-HDM3D-C5-8X8 Rear Panel.....	7
1.7.3 HDM3D-C5SW-R.....	8
1.7.3 Dip Switch for EDID & Audio Settings (SW1 – SW4).....	9
1.7.4 SW Main Dip Switch for Firmware Update.....	10
1.8    IR Control Patch .....	11
1.8.1 Supported IR Data Formats .....	12
1.9    Installation (SW-HDM3D-C5-8X8).....	13
1.10   Operation and IR Control.....	14
1.10.1 Source Side.....	14
1.10.2 Display Side.....	15
1.11   RS232 Serial Port Control.....	16
1.11.1 RS232 Commands .....	19
Section 2: Specifications.....	20
2.1    EDID Learning.....	21
2.1 Method 1: Manually Connect HDMI Displays to HDMI Input Ports.....	21
2.2 Method 2: Use the Front Panel of The Master Unit.....	22
2.2    IR Discrete Code.....	23

## Section 1: Getting Started

### 1.1 Important Safeguards

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

#### What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
  - Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
  - Repair or attempted repair by anyone not authorized by us.
  - Any damage of the product due to shipment.
  - Removal or installation of the product.
  - Causes external to the product, such as electric power fluctuation or failure.
  - Use of supplies or parts not meeting our specifications.
  - Normal wear and tear.
  - Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

### 1.2 Safety Instructions

The Avenview SW-HDM3D-C5-8X8 HDMI 1.3 Matrix Switch over CAT5 with Full 3D Support has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment's, the SW-HDM3D-C5-8X8 should be used with care. Read the following safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Do not dismantle the housing or modify the module.
- Dismantling the housing or modifying the module may result in electrical shock or burn.
- Refer all servicing to qualified service personnel.
- Do not attempt to service this product yourself as opening or removing housing may expose you to dangerous voltage or other hazards
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Have the module checked by a qualified service engineer before using it again.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

## **1.3 Regulatory Notices Federal Communications Commission (FCC)**

This equipment has been tested and found to comply with Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

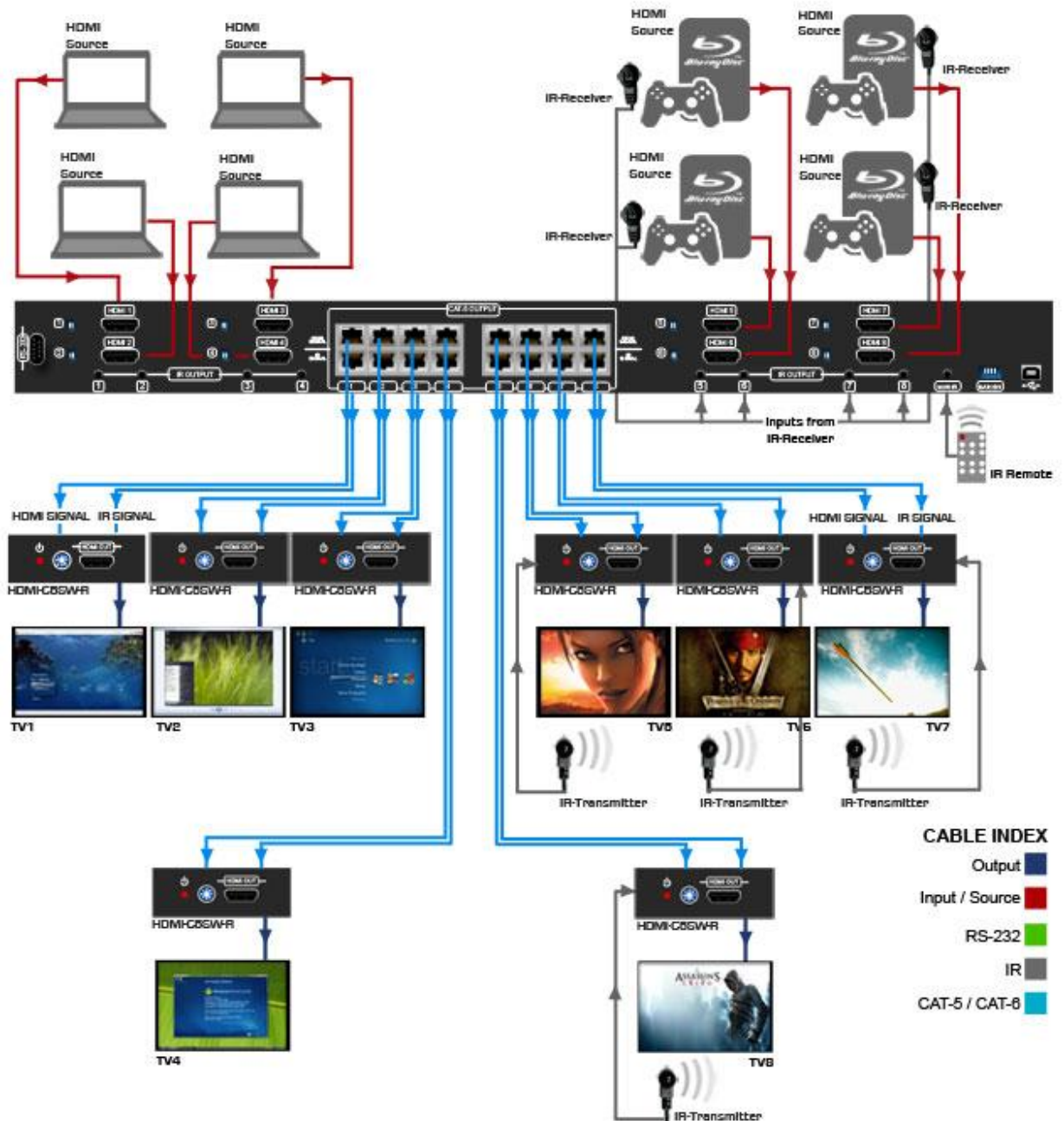
Any changes or modifications made to this equipment may void the user's authority to operate this equipment.

## **1.4 Introduction**

The Avenview SW-HDM3D-C5-8X8, HDMI over CAT5 Matrix with IR Pass-through and Full 3D Support provides the most flexible and cost effective solution in the market to route high definition video sources plus multi-channel (up to 7.1 channel) digital audio from any of the eight HDMI sources to the remote displays at the same time. Through low cost Cat-5/5e/6 LAN cables, not only high quality video and audio can be transmitted to the display sites, but also users can switch among eight HDMI sources using the push-in button or remote control. With single power design at the source site, each remote module is easily installed without power supply. Furthermore, the built-in IR extension function, users can control the HDMI source devices such as Blu-ray Disc Player, Satellite Receivers etc. at display site directly.

# SW-HDM3D-C5-8X8

720p/1080i = 50m (165 feet) CAT5  
 720p/1080i = 55m (200 feet) CAT6  
 1080p = 30m (130 feet) CAT5  
 1080p = 40m (165 feet) CAT6



- Supports HDMI Deep Color & Full 3D
- Re-clocking TMDS single
- HDCP compliant
- Allows any source to be displayed on multiple displays at the same time
- Allows any HDMI display to view any HDMI source at any time
- Supports 7.1 channel digital audio
- Supports default HDMI EDID and learns the EDID of displays
- The matrix master can switch every output channels to any HDMI inputs by push-in button, IR remote control, or RS-232 control
- Allows controlling local HDMI sources such as DVD and TiVo by attached IR extender from remote receiver to matrix master
- Allows to control matrix master through IR remote control at remote receiver's site
- Extends video signal up to 35m (115 feet) over CAT5e at 1080p and likely longer with better HDMI source device, better grade HDMI display, and better quality solid CAT6 cable
- Easy installation with rack-mounting and wall-mounting designs for master and receiver respectively
- Fast response time – 2~5 seconds for channel

## 1.5 Package Contents

Before you start the installation of the converter, please check the package contents.

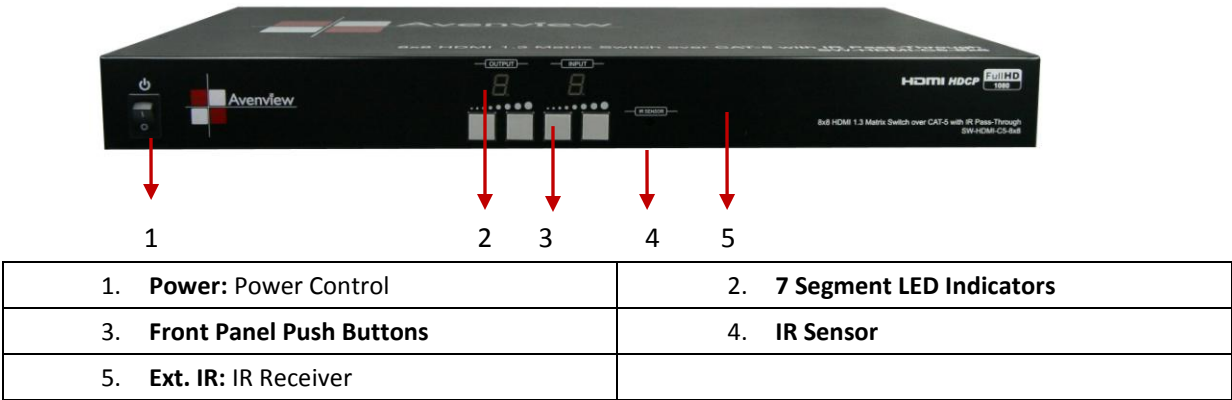
- |                     |     |
|---------------------|-----|
| - SW-HDM3D-C5-8X8   | x 1 |
| - HDM3D-C5SW-R      | x 8 |
| - IR Blaster        | x 8 |
| - IR Receiver       | x 9 |
| - IR Remote Control | x 1 |
| - Rackmounting Ear  | x 2 |
| - Power Cable       | x 1 |
| - User's Manual     | x 1 |
| - Software CD       | x 1 |

## 1.6 Before Installation

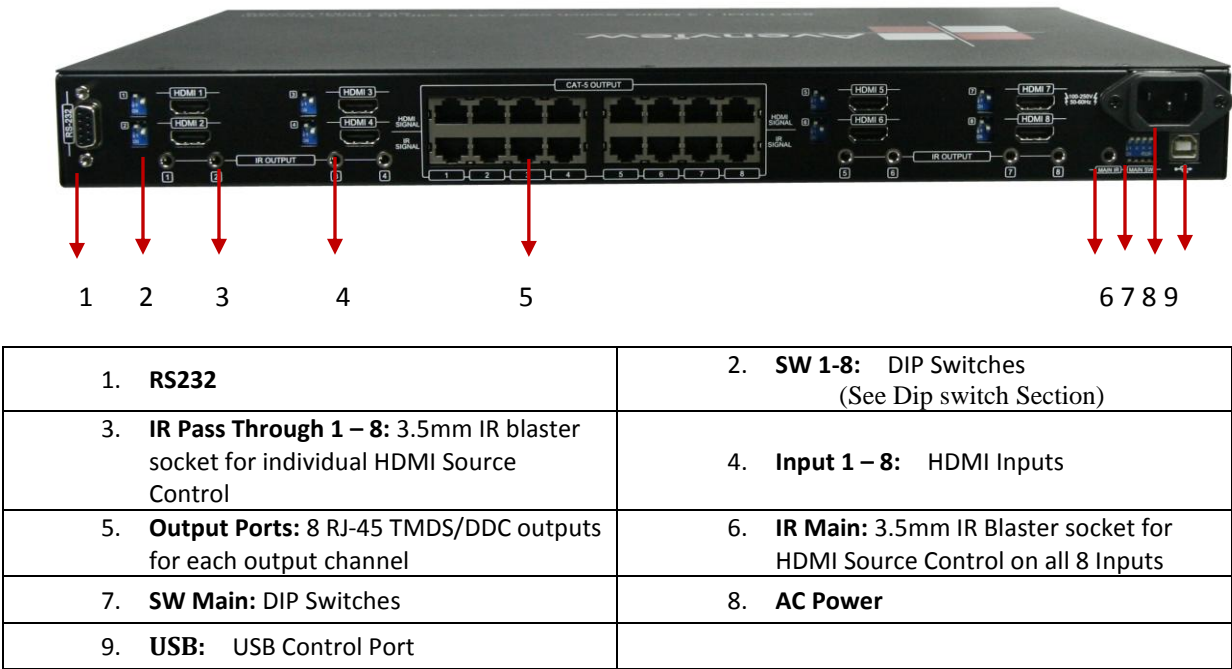
- Put the product in an even and stable location. If the product falls down or drops, it may cause an injury or malfunction.
- Don't place the product in too high temperature (over 50°C), too low temperature (under 0°C) or high humidity.
- Use the DC power adapter with correct specifications. If inappropriate power supply is used then it may cause a fire.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.

1.7 Panel Description

1.7.1 SW-HDM3D-C5-8X8 Front Panel

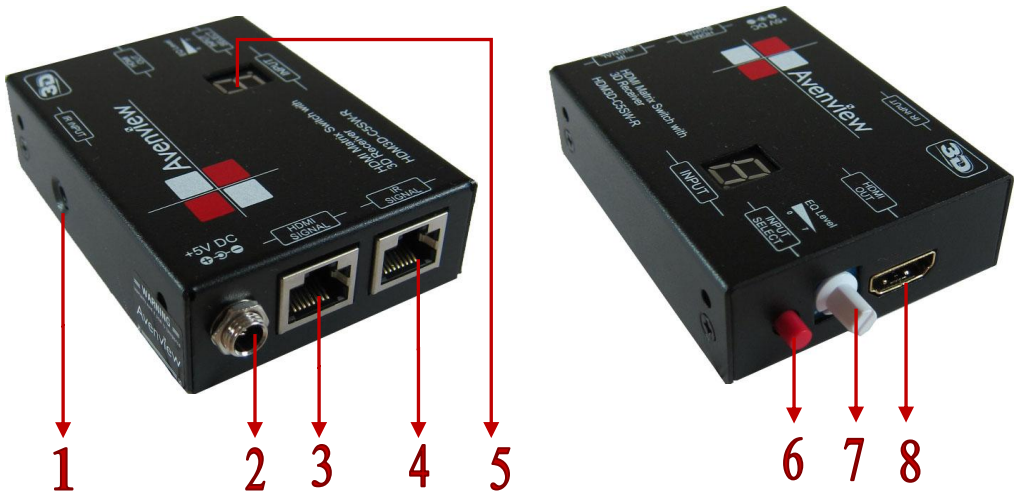


1.7.2 SW-HDM3D-C5-8X8 Rear Panel





1.7.3 HDM3D-C5SW-R











1. <b>IR Receiver:</b> Plug in IR receiver	2. <b>5V DC Power jack</b>
3. <b>HDMI Signal Input:</b> Plug in CAT 5/6	4. <b>IR signal:</b> Plug in the CAT5/6 connected from the respective <b>IR signal</b> port on the SW-HDM3D-C5-8X8.
5. <b>IN Put Channel:</b> Displays the current HDMI Source	6. <b>Input Select:</b> Push button for switch Input source channel in sequential order
7. <b>Signal Level 0 – 7:</b> Adjust the 8-level equalization control to the received HDMI signals.	8. <b>HDMI Output:</b> Connect HDMI cable to HDMI Display

EQ Level (Signal Level 0 – 7)

Adjust the 8-level equalization control to the received HDMI signals. The HDMI signal level varies from 0 (strongest) to 7 (weakest) for respective transmission length from longest possible range to short distance. Please adjust the signal level from 7 to 0 and stop turning the rotary switch whenever the audio/video is playing normally. Inappropriate signal level setting may cause overpowering issue that would shorten the product life significantly!





### 1.7.3 Dip Switch for EDID & Audio Settings (SW1 – SW8)

DIP Switch Position		Video	Audio	Description
PIN # 1	PIN # 2			
OFF 	OFF 	1080p	Surround	<b>Default Mode<sup>1</sup></b> : EDID up to 1080p & Surround sound Audio Output up to 7.1Ch (DTS-HD Master & Dolby TrueHD)
OFF 	ON 	720p/1080i	Stereo <sup>2</sup>	<b>Safe Mode<sup>2</sup></b> : Forces system to output at 720p/1080i with Stereo Audio.
ON 	OFF 	Bypass	Bypass	<b>EDID Learning Mode<sup>3</sup></b> : for learning EDID from the display while playing any received HDMI Audio format.
ON 	ON 	Bypass <sup>4</sup>	Stereo <sup>4</sup>	<b>EDID Learning &amp; Stereo Mode<sup>5</sup></b> : For learning EDID from the display while enforcing stereo output.

1. Factory default setting of [SW1]-[SW8] is pin-1 at OFF  & pin-2 at OFF  for 1080p video and surround sound audio.

2 If the HDTV shows video but without audio, please try to set audio mode to stereo.

3 If you encounter any unsolved audio/video output problem during system installation, please turn any [SW1]-[SW8] to pin-1 at ON  & pin-2 at OFF  for safe mode to select the system EDID up to 720p(1080i) video and stereo audio for system check. However, the safe mode cannot be initiated if your HDMI source is set to enforce 1080p output. In this case, please reconfigure your HDMI source to all resolution output for troubleshooting.

4 Bypass means the matrix will maintain playing the original format of HDMI signals in video and perhaps audio. By setting at this mode, the users may encounter compatibility issue among different kinds of HDMI sources and displays. If you cannot get the audio and/or video output normally at the system installation, please change the DIP switch setting to default mode or even safe mode to verify the functionality of the device.

#### 1.7.4 SW Main Dip Switch for Firmware Update

DIP Switch Position		PIN # 1	PIN # 2	PIN # 3	PIN # 4
Normal Operation Mode <sup>6</sup> RS232		OFF	OFF	OFF	OFF
Normal Operation Mode USB		OFF	OFF	OFF	ON
Firmware Update Mode <sup>7</sup>	Block A [main]	ON	OFF	OFF	OFF
	Block B [remote]	ON	OFF	ON	OFF
	Block C [HDMI]	ON	ON	OFF	OFF

6 Factory default for **SW Main** is pin#1-OFF [ ], pin#2-OFF [ ], pin#3-OFF [ ], & pin#4-OFF [ ]. PLEASE MAINTAIN THIS SETTING AT ANYTIME FOR REGULAR USE VIA RS-232 CONTROL!

7 Sequence for firmware update

**WARNING!**

*[Firmware update only can be done via RS-232 port and connection to PC set at COM1]*

[1]. Power off the Matrix unit. Execute the firmware update program on your PC via COM1 port connection to the RS-232 port of the Matrix unit.

[2]. Set the pin#1 of [**SW Main**] at ON [ ] for firmware update mode.

[3]. Set pin#2 and pin#3 at respective positions to assign which Block to be updated.

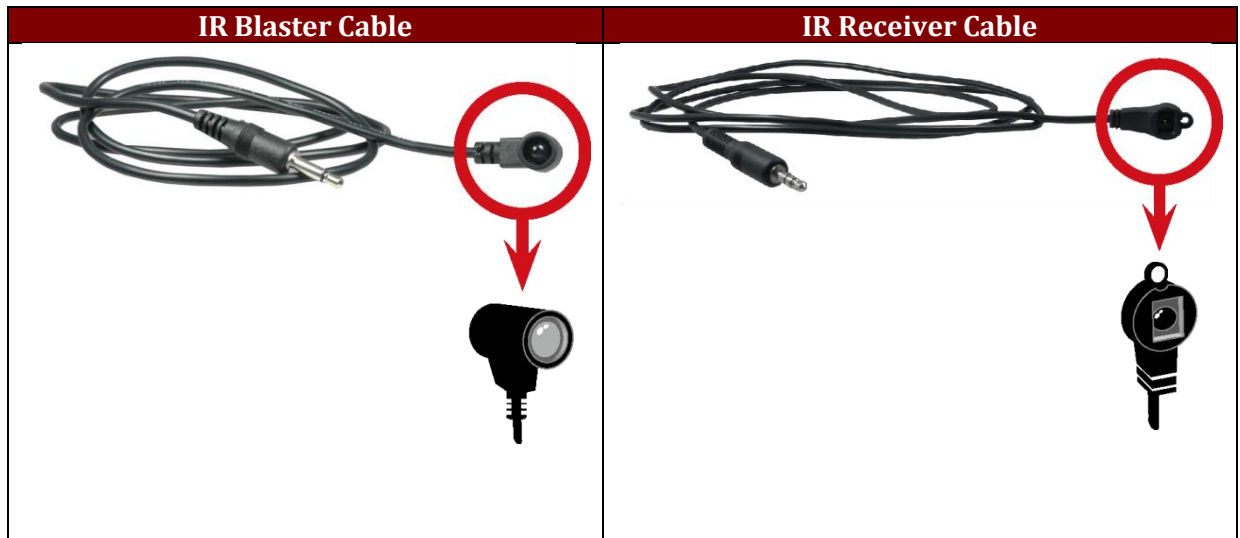
[4]. Power on the Matrix unit. The firmware update program should begin this update sequence automatically. If not, please check the RS-232 connection status between PC and Matrix unit.

[5]. After the OK message shows up to indicate the firmware update sequence for designated Block is complete, please turn off the Matrix unit.

[6]. Repeat step 3 ~ step6 if you want to update the firmware of the remaining Blocks.

[7]. Set the [**SW Main**] switch position to Normal Operation Mode.

## 1.8 IR Control Patch



*Incorrect placement of IR Blaster and Receiver may result in the failure of the IR extenders. Please check carefully before plugging in the IR extender to the respective IR sockets. Warranty will not cover the damage.*

### 1.8.1 Supported IR Data Formats

Data Format	Suitable	Not Recommended
NEC	<input checked="" type="checkbox"/>	
RC5	<input checked="" type="checkbox"/>	
TOSHIBA MICOM CODE	<input checked="" type="checkbox"/>	
GRUNDIG CODE	<input checked="" type="checkbox"/>	
SONY 12 BIT CODE	<input checked="" type="checkbox"/>	
SONY 15 BIT CODE	<input checked="" type="checkbox"/>	
SONY 20 BIT CODE	<input checked="" type="checkbox"/>	
RCA CODE		<input checked="" type="checkbox"/>
RCM CODE		<input checked="" type="checkbox"/>
MATSHUSHITA CODE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MITSUBISHI CODE	<input checked="" type="checkbox"/>	
ZENITH CODE	<input checked="" type="checkbox"/>	
JVC CODE	<input checked="" type="checkbox"/>	
M50560-001P	<input checked="" type="checkbox"/>	
MN6125H	<input checked="" type="checkbox"/>	
MN6125L	<input checked="" type="checkbox"/>	
MN6014-C5D7	<input checked="" type="checkbox"/>	
MN6014-C6D6	<input checked="" type="checkbox"/>	
MC14457P	<input checked="" type="checkbox"/>	
LC7464(AHEA)	<input checked="" type="checkbox"/>	
GEMINI-CM	<input checked="" type="checkbox"/>	



## 1.9 Installation (SW-HDM3D-C5-8X8)

To setup Avenview SW-HDM3D-C5-8X8 follow these steps for connecting to a device:

### Matrix Switch

1. Connect all sources to HDMI Inputs on the 8X8 HDMI over CAT5 Matrix Switch (SW-HDM3D-C5-8X8)
2. Connect each HDMI CAT 5/6 output on the SW-HDM3D-C5-8X8 to respective CAT 5/6 input on the remote receiver HDM3D-C5SW-R
3. Connect each IR CAT 5/6 output on the SW-HDM3D-C5-8X8 to respective CAT 5/6 input on the remote receiver HDM3D-C5SW-R
4. Connect IR emitter cable to the SW-HDM3D-C5-8X8 and direct the IR emitter to the build-in IR receiver of the sources
5. Connect the +5V 6A DC power supply to the SW-HDM3D-C5-8X8
6. Power on all HDMI sources
7. Power on the SW-HDM3D-C5-8X8

### Receiver

1. Connect each HDMI output to HDMI displays.
2. Connect the **HDMI SIGNAL** port with CAT6 on the HDM3D-C5SW-R to the **HDMI SIGNAL** port on the SW-HDM3D-C5-8X8.
3. Connect the **IR CONTROL** port on the HDM3D-C5SW-8 to the **IR CONTROL** port on the SW-HDM3D-C5-8X8.
4. Connect IR receiver and place the IR receiver at the appropriate position that can receive the IR command signals sent from the users.
5. Dial the 8-level rotary control switch to adjust the HDMI signal level until the picture and sound are clear. It is recommended to dial from 7 to 0 to find the optimal visual experience.

## 1.10 Operation and IR Control

### 1.10.1 Source Side

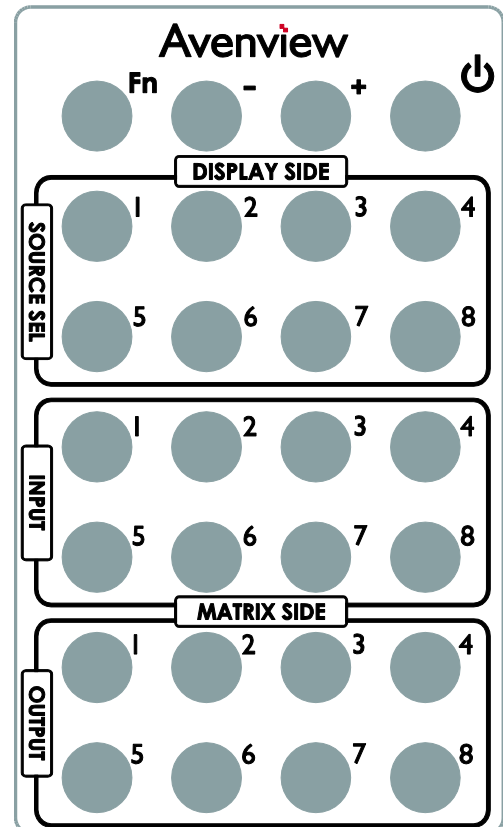
#### 1.10.1.1 Method A: Push Button

1. Use the “+” or “-” channel button on output port to select which port to be changed.  
“+”: change selected output port in ascending order  
“-”: change selected output port in descending order
2. Push the “+” or “-” channel button on Input channel to select the HDMI input source you want to display on this selected output port in step 1 in sequential order. Once you reach the desired input channel you want to display on this selected output port, leave it and the setting will be effective in a few seconds.

#### 1.10.1.2 Method B: IR Remote Control

Firstly please push one of the INPUT buttons to choose which HDMI input source you are going to setup. After that, you can have multiple outputs playing the same content from the selected INPUT #1-#8 by pushing the corresponding OUTPUT buttons. The setting will be effective in a couple of seconds.

INPUT 1	HDMI input port #1
INPUT 2	HDMI input port #2
INPUT 3	HDMI input port #3
INPUT 4	HDMI input port #4
INPUT 5	HDMI input port #5
INPUT 6	HDMI input port #6
INPUT 7	HDMI input port #7
INPUT 8	HDMI input port #8
OUTPUT 1	HDMI output port #1
OUTPUT 2	HDMI output port #2
OUTPUT 3	HDMI output port #3
OUTPUT 4	HDMI output port #4
OUTPUT 5	HDMI output port #5
OUTPUT 6	HDMI output port #6
OUTPUT 7	HDMI output port #7
OUTPUT 8	HDMI output port #8



## 1.10.2 Display Side

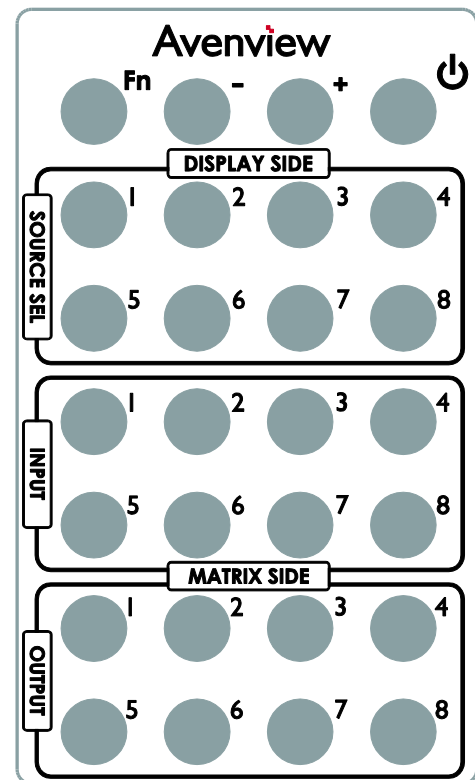
### 1.10.2.1 Method A: Push Button

Press the INPUT SELECT push button to switch the input source on the respective output port connected to the matrix receiver in sequential order. The selected input source will be displayed on the LED of INPUT CHANNEL.

### 1.10.2.2 Method B: IR Remote Control for Switching Input Channels

Please decide which input channel to be selected by pressing Source Selection 1 to Source Selection 8. Or you can use left ◀ and right ▶ button to enter IR control mode and select the input channel in ascending and descending order respectively. The setting will be effective in a couple of seconds.

◀	Switch input port in descending order*
▶	Switch input port in ascending order*
SOURCE SEL. 1	Switch the display channel at the remote site to input port 1
SOURCE SEL. 2	Switch the display channel at the remote site to input port 2
SOURCE SEL. 3	Switch the display channel at the remote site to input port 3
SOURCE SEL. 4	Switch the display channel at the remote site to input port 4
SOURCE SEL. 5	Switch the display channel at the remote site to input port 5
SOURCE SEL. 6	Switch the display channel at the remote site to input port 6
SOURCE SEL. 7	Switch the display channel at the remote site to input port 7
SOURCE SEL. 8	Switch the display channel at the remote site to input port 8

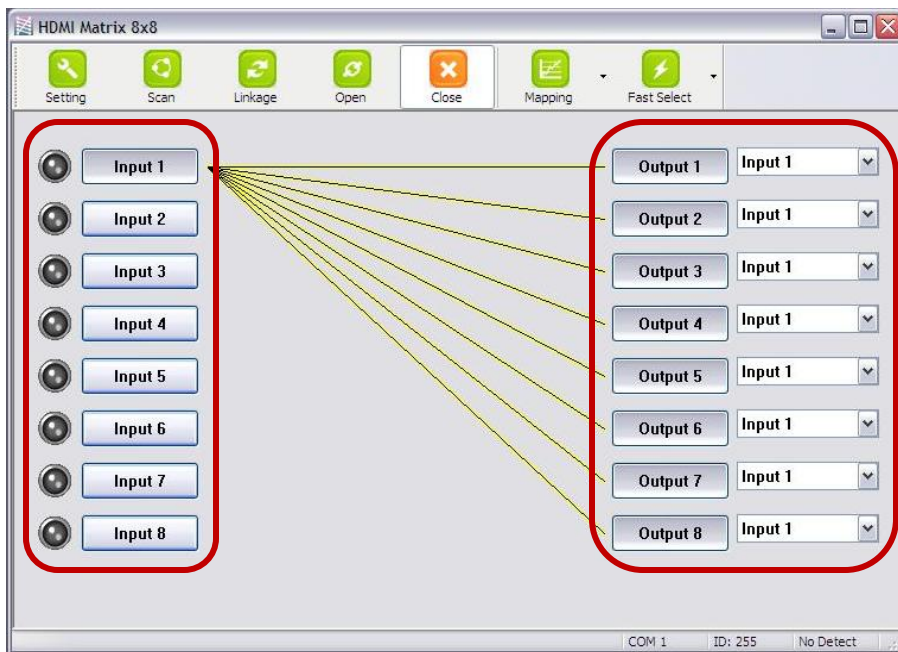


Right (▶) button to switch input source in ascending order (1, 2, 3, 4, 5, 6, 7, 8, 1, 2, .....)

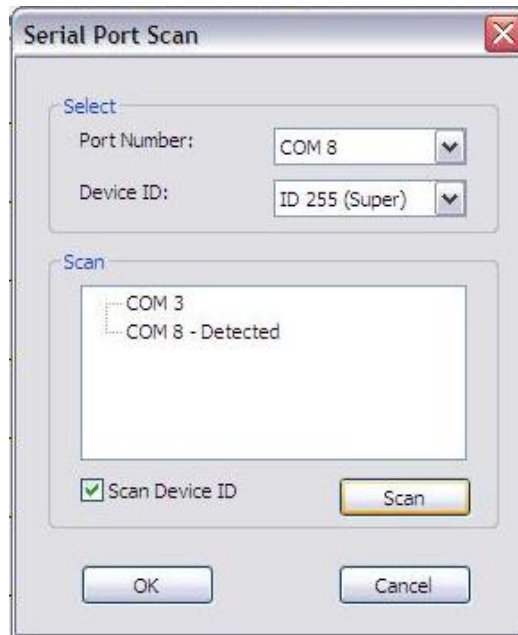
Left (◀) button to switch input source in descending order (1, 8, 7, 6, 5, 4, 3, 2, 1, 2, .....)



## 1.11 RS232 Serial Port Control



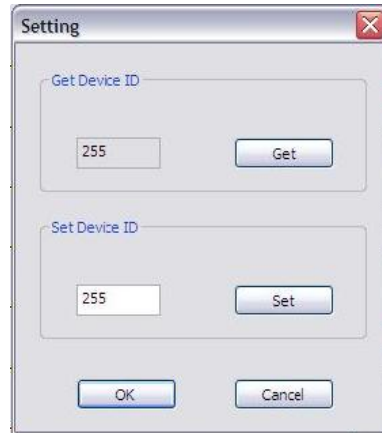
**Scan:** Press Scan button, the machine will scan the all com port and show them.  
Select the RS232 serial port connected to the machine. And set device ID 255 is for all device.  
Only the same device id or 255 can get the command you sent.  
Press OK. Get the new status from the machine you select.



**Setting:**

Press Get button to read back device ID.

Press Set button to write device ID.



**Linkage:** Press Linkage button to read back all status

**Open / Close:** Press this button to Close or Open COM Port.

**Mapping Button:**

Select All Output:

Select "set all output", and then select the source on main menu. You can quickly set all output to the same source.

Unselect All Output:

Release output selection.

Select Input1~8-Output:

Select Input Source. Then select the output port icon.

For example:

Select input source 1. Then select output port one and two. The video and audio will be sending to port one and two.

### Fast Select Button:

Press **Fast select** button. Quick setting.

Input one ➡ Output Port one

Input two ➡ Output Port two

.....

Press Fast select pull down menu.

Select Input Num-Output Num

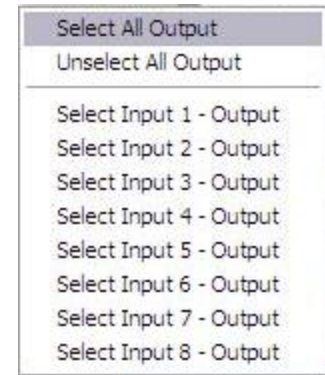
Input source #1 ➡ Output port #1

Input source #2 ➡ Output port #2

.....

Select Input\* - All Output

Send the same source to all output.



### Output Port:

Pull down menu and select which source to be sent to this output port.

### One by one setting

On main menu screen.

First select input source. Then select the output ports which you want to send the video and audio from this source. When you select the input source, the source will change to gray. When you select the output port one by one, the selected output port will change to gray.

The linking line will change to yellow.

### Group setting

First select output ports one by one. Then select the input source. The selected output ports change the setting at the same time.

### By using Terminal:

Baud rate: 9600  
Data length: 8bit  
Parity check: No  
Stop bit: 1

### 1.11.1RS232 Commands

COMMAND	ACTION	COMMAND	ACTION	COMMAND	ACTION
ST	System Status*	C5	Output C select Input5	F3	Output F select Input3
VR	Firmware Version	C6	Output C select Input6	F4	Output F select Input4
A1	Output A select Input1	C7	Output C select Input7	F5	Output F select Input5
A2	Output A select Input2	C8	Output C select Input8	F6	Output F select Input6
A3	Output A select Input3	D1	Output D select Input1	F7	Output F select Input7
A4	Output A select Input4	D2	Output D select Input2	F8	Output F select Input8
A5	Output A select Input5	D3	Output D select Input3	G1	Output G select Input1
A6	Output A select Input6	D4	Output D select Input4	G2	Output G select Input2
A7	Output A select Input7	D5	Output D select Input5	G3	Output G select Input3
A8	Output A select Input8	D6	Output D select Input6	G4	Output G select Input4
B1	Output B select Input1	D7	Output D select Input7	G5	Output G select Input5
B2	Output B select Input2	D8	Output D select Input8	G6	Output G select Input6
B3	Output B select Input3	E1	Output E select Input1	G7	Output G select Input7
B4	Output B select Input4	E2	Output E select Input2	G8	Output G select Input8
B5	Output B select Input5	E3	Output E select Input3	H1	Output H select Input1
B6	Output B select Input6	E4	Output E select Input4	H2	Output H select Input2
B7	Output B select Input7	E5	Output E select Input5	H3	Output H select Input3
B8	Output B select Input8	E6	Output E select Input6	H4	Output H select Input4
C1	Output C select Input1	E7	Output E select Input7	H5	Output H select Input5
C2	Output C select Input2	E8	Output E select Input8	H6	Output H select Input6
C3	Output C select Input3	F1	Output F select Input1	H7	Output H select Input7
C4	Output C select Input4	F2	Output F select Input2	H8	Output H select Input8

## Section 2: Specifications

Item	Description	
<b>Units</b>	SW-HDM3D-C5-8X8	HDM3D-C5SW-R
<b>Unit Description</b>	8X8 HDMI Matrix Switch over CAT5 with 3D Support	HDMI 1.3 Receiver over CAT5 with 3D Support
<b>HDMI Compliance</b>	HDMI Deep Color & Full 3D	
<b>HDCP Compliance</b>	Yes	
<b>Video Bandwidth</b>	Single Link 225 MHz (6.75Gbps)	
<b>Supported Resolutions</b>	480i / 480p / 720p / 1080i / 1080p60	
<b>Resolution and Distance</b>	<b>Full HD:</b> (1080p) ~ 35meter (115feet) (CAT5e) / 40meter (130feet) (CAT6) <b>HD:</b> (720p/1080i) ~ 50meter (165feet) (CAT5e) / 55meter (180feet) (CAT6)	
<b>Audio Support</b>	Surround Sound (up to 7.1 Ch.) or Stereo Digital Audio	
<b>Equalization</b>	-	8 Level Digital Control
<b>Input TMDS Signal</b>	1.2 Volts (peak-to-peak)	
<b>Input DDC Signal</b>	5 Volts (peak-to-peak, TTL)	
<b>ESD Protection</b>	- Human body model — ±15kV (air-gap discharge) & ±8kV (contact discharge) - Core chipset — ±8kV	
<b>Input</b>	8 x HDMI 1 x RS232	1 x RJ45 TMDS 1 x RJ45 DDC 1 x IR Socket for IR Receiver
<b>Output</b>	8 x RJ45 HDMI Signal 8 x RJ45 IR Control 9 x IR Socket for IR Blaster	1 x HDMI
<b>HDMI Input Selection</b>	Push Button / IR Remote / RS232	Push Button / IR Remote
<b>HDMI Source Control</b>	Through IR Control Path from IR Receiver at Remote Receiver to IR Blaster at Matrix Switch	
<b>IR Remote Control</b>	Electro-optical characteristics: $\theta = 25^\circ$ / Carrier frequency: 20~60kHz	
<b>HDMI Connector</b>	Type A (19 pin female)	
<b>RJ45 Connector</b>	WE/SS 8P8C with 2 LED indicators	
<b>RS232 Connector</b>	DE-9 (9-pin D-sub Female)	
<b>3.5mm Connector</b>	Earphone jack for IR blaster <b>[IR Main]</b> IR control on all source devices <b>[IR PASS-THROUGH 1~8]</b> IR control on individual source device	Earphone jack for IR receiver <b>[IR RECEIVER]</b> Receives IR commands from remote control
<b>DIP Switch</b>	[SW1~SW8] 2-pin for EDID & audio mode [SW Main] 4-pin for operation & firmware update	
<b>Dimensions (L x W x H)</b>	17" x 11" x 1.7"	3.3" x 2.4" x 1"
<b>Power Supply</b>	5V 6A DC	Most not required
<b>Power Consumption</b>	60 Watt (max)	1.5 Watt (max) / provided by SW-HDM3D-C5-8X8

### Environmental

<b>Operating Temperature</b>	32° ~ 104°F (0° to 40°C)
------------------------------	--------------------------

## 2.1 EDID Learning

The EDID learning function is only necessary whenever you encounter any display on the HDMI output port that cannot play audio and video properly. Because the HDMI source devices and displays may have various level of capability in playing audio and video, the general principle is that the source device will output the lowest standards in audio format and video resolutions to be commonly acceptable among all HDMI displays. In this case, a 720p stereo HDMI signal output would be probably the safest choice. Nevertheless, the user can force the matrix to learn the EDID of the lowest capable HDMI display among others to make sure all displays are capable to play the HDMI signals normally by performing the procedures stated below.

*SW1-SW4 Pin#1 and Pin#2 must be set "ON" & "ON" for EDID Learning Mode*

<i>DIP Switch Position</i>		<i>Video</i>	<i>Audio</i>	<i>Description</i>
<i>Pin 1</i>	<i>Pin 2</i>			
<i>ON</i> [↓]	<i>ON</i> [↓]	<i>Bypass</i>	<i>Bypass</i>	<i>EDID Learning – for learning EDID from the receiver</i>

### 2.1 Method 1: Manually Connect HDMI Displays to HDMI Input Ports

1. Power up the matrix master unit. Connect the HDMI display that its EDID needs to be learned to any of the HDMI **INPUT1 – INPUT8** port where your source device has trouble to show the picture normally.
2. To learn the display's EDID for source device connected to respective HDMI **INPUT1 – INPUT8** port, pull both pins of respective DIP switch **SW1 – SW8** up-and-down to stay at ON [↓] - ON [↓] and wait for about 5 seconds to complete the EDID learning process. You DON'T NEED to pull up the DIP switch again unless you want to learn another display's EDID by pulling both DIP switch pin-1 & pin-2 of **SW1 – SW8** up-and-down one more time.
3. Repeat step1 & step2 if you want to learn the EDID of this HDMI display on any other HDMI input ports that have same trouble playing the audio/video properly.

## 2.2 Method 2: Use the Front Panel of The Master Unit

Button	Function
<b>Output Port</b>	EDID will be read from display via the connected receiver unit from the respective output port
<b>Input Channel</b>	The EDID will be sent to the input source connected to respective HDMI input port

### One by One learning

1. Select the desired **Output Port** and **Input Channel** that you want the EDID of the display connected to this specified output port can be learned for the specified input channel.
2. Press the “+” button of the **Output Port** and “-” button of the **Input Channel** at the same time for 2 seconds.
3. Release these two buttons. The EDID will be read from the receiver unit connected to the display and sent the **Output Port** then written to the chosen **Input Channel**.
4. If the operation is successful, the Input Channel will show “O” (OK). If the operation is not successful, it will show “F” (failure).



### One to All learning

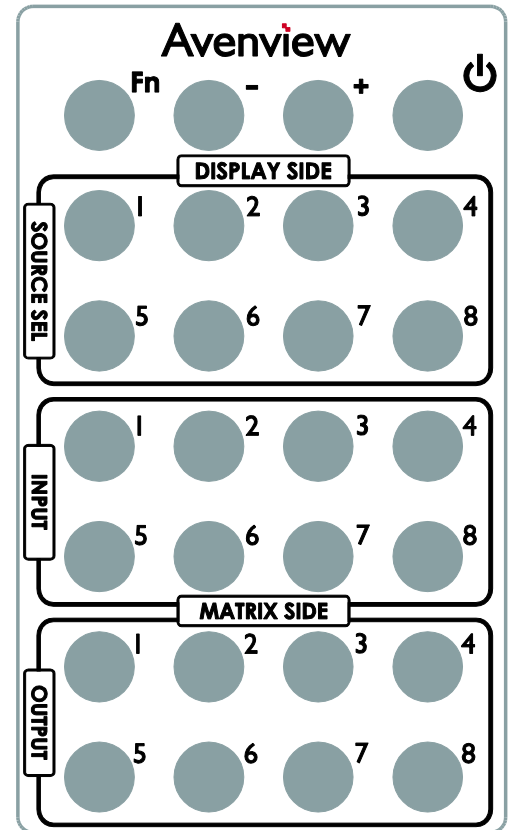
1. Press the “+” button of the **Output Port** and the “+” button of the **Input Channel** at the same time for 2 seconds.
2. Release these two buttons. . The EDID will be read from the receiver unit connected to the display and sent the **Output Port** then written to all eight **Input Channels**.
3. If the operation is successful, the Input Channels will show “O” (OK). If the operation is not successful, it will show “F” (failure).



## 2.2 IR Discrete Code

Default Custom Code - IR2 Code: 00 FF

Function 0x17	 0x0A	 0x0C	POWER 0x02
SOURCE SEL. 1 0x54	SOURCE SEL. 2 0x55	SOURCE SEL. 3 0x56	SOURCE SEL. 4 0x01
SOURCE SEL. 5 0x57	SOURCE SEL. 6 0x58	SOURCE SEL. 7 0x59	SOURCE SEL. 8 0x06
INPUT 1 0x18	INPUT 2 0x5B	INPUT 3 0x19	INPUT 4 0x07
INPUT 5 0x1B	INPUT 6 0x5A	INPUT 7 0x1A	INPUT 8 0x04
OUTPUT 1 0x0E	OUTPUT 2 0x0D	OUTPUT 3 0x12	OUTPUT 4 0x05
OUTPUT 5 0x1C	OUTPUT 6 0x1D	OUTPUT 7 0x1F	OUTPUT 8 0x1E



### Custom Code - IR3 Code: 0x12 0x21

Custom Code: 0x12 0x21								
	Output 1	Output 2	Output 3	Output 4	Output 5	Output 6	Output 7	Output 8
Source 1	0xA1	0xB1	0xC1	0xD1	0xE1	0xF1	0x11	0x21
Source 2	0xA2	0xB2	0xC2	0xD2	0xE2	0xF2	0x12	0x22
Source 3	0xA3	0xB3	0xC3	0xD3	0xE3	0xF3	0x13	0x23
Source 4	0xA4	0xB4	0xC4	0xD4	0xE4	0xF4	0x14	0x24
Source 5	0xA5	0xB5	0xC5	0xD5	0xE5	0xF5	0x15	0x25
Source 6	0xA6	0xB6	0xC6	0xD6	0xE6	0xF6	0x16	0x26
Source 7	0xA7	0xB7	0xC7	0xD7	0xE7	0xF7	0x17	0x27
Source 8	0xA8	0xB8	0xC8	0xD8	0xE8	0xF8	0x18	0x28

### Custom Code - IR4 Code: 0x13 0x31

Custom Code: 0x13 0x31								
	Output 1	Output 2	Output 3	Output 4	Output 5	Output 6	Output 7	Output 8
Source 1	0xAE	0xBE	0xCE	0xDE	0xEE	0xFE	0x1E	0x2E
Source 2	0xAD	0xBD	0xCD	0xDD	0xED	0xFD	0x1D	0x2D
Source 3	0xAC	0xBC	0xCC	0xDC	0xEC	0xFC	0x1C	0x2C
Source 4	0xAB	0xBB	0xCB	0xDB	0xEB	0xFB	0x1B	0x2B
Source 5	0xAA	0xBA	0xCA	0xDA	0xEA	0xFA	0x1A	0x2A
Source 6	0xA9	0xB9	0xC9	0xD9	0xE9	0xF9	0x19	0x29
Source 7	0xA8	0xB8	0xC8	0xD8	0xE8	0xF8	0x18	0x28
Source 8	0xA7	0xB7	0xC7	0xD7	0xE7	0xF7	0x17	0x27

Using terminal to set Custom Code

Example: Set custom code from 0x01 0xEE to 0x13 0x31

>> IR4 ----- command (using RS-232 terminal command mode)

>> IR4 ----- echo

Command	Custom Code
<b>IR2</b>	0x00 0xFF
<b>IR3</b>	0x12 0x21
<b>IR4</b>	0x13 0x31



**205 Westwood Ave, Long Branch, NJ 07740**  
**Phone: 866-94 BOARDS (26273) / (732)-222-1511**  
**Fax: (732)-222-7088 | E-mail: sales@touchboards.com**

#### **Disclaimer**

While every precaution has been taken in the preparation of this document, Avenview Inc. assumes no liability with respect to the operation or use of Avenview hardware, software or other products and documentation described herein, for any act or omission of Avenview concerning such products or this documentation, for any interruption of service, loss or interruption of business, loss of anticipatory profits, or for punitive, incidental or consequential damages in connection with the furnishing, performance, or use of the Avenview hardware, software, or other products and documentation provided herein.

Avenview Inc. reserves the right to make changes without further notice to a product or system described herein to improve reliability, function or design. With respect to Avenview products which this document relates, Avenview disclaims all express or implied warranties regarding such products, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, and non-infringement.